

ABSTRACT OF THE DISCLOSURE

Provided is an electro-optic modulator comprising an organic free radical

5 compound, preferably comprising a reflective organic free radical compound, as an active modulating material. The modulator is reversibly switched between two states of high and low transmission at a wavelength by the application of an electric current. Preferably, the optical modulator is solid state with no moving parts such that the active modulating material does not move when reversibly switched between the two states.

10 Also provided are methods of modulating an optical signal utilizing such electro-optic modulators.